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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,846	10/03/2003	Gordon Bowman	GLH 08-896305	2420
27667	7590	04/14/2009		
HAYES SOLOWAY P.C. 3450 E. SUNRISE DRIVE, SUITE 140 TUCSON, AZ 85718			EXAMINER KISS, ERIC B	
			ART UNIT	PAPER NUMBER
			2192	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/678,846

**Applicant(s)**

BOWMAN ET AL.

**Examiner**

ERIC B. KISS

**Art Unit**

2192

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 and 23-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 23-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(c), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(c) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 24, 2008, has been entered. Claims 1-10 and 23-35 are pending.

### ***Response to Arguments***

2. Applicant's arguments filed October 14, 2008, have been fully considered but they are not persuasive.

Regarding the rejections under §§ 101, 112, the substitution of the word "providing" for the word "implementing" does not seem to have improved the claims, and as noted below, it is still not clear what functional result, if any, such "providing" would achieve.

Applicant's arguments regarding the rejection of claims 1-9 and 23-25 under § 102 are moot in view of the new ground of rejection set forth below.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 10 each recite a processor for executing instructions, the executed instructions “providing” recited components of the claims. These claims are indefinite because it is unclear what concrete steps are involved in such “providing.” Specifically, it is unclear whether providing the components is intended to merely cause the components to exist (i.e., become stored in memory) or whether the execution of instructions is intended to put existing components to some functional use (e.g., whether the provided components are themselves the executable instructions). With regard to the scripts recited in the claims, it is unclear whether “providing” these scripts is intended to mean creating the scripts or actually executing the scripts (the claims appear to recite executing instructions to provide scripts and not necessarily executing scripts).

*Claim Rejections - 35 USC § 101*

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 1-10 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Descriptive material can be characterized as either “functional descriptive material” or “nonfunctional descriptive material.” In this context, “functional descriptive material” consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of “data structure” is “a physical or logical relationship among data elements, designed to support specific data manipulation functions.” The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) “Nonfunctional descriptive material” includes but is not limited to music, literary works and a compilation or

mere arrangement of data. Both types of “descriptive material” are nonstatutory when claimed as descriptive material *per se*. *In re Warmerdam*, 33 F.3d 1354, 1361, 31 USPQ2d 1754, 1760 (claim to a data structure *per se* held nonstatutory).

Data structures not claimed as embodied in computer-readable media are descriptive material *per se* and are not statutory because they are not capable of causing functional change in the computer. *See, e.g., In re Warmerdam*, 33 F.3d 1354, 1361, 31 USPQ2d 1754, 1760 (claim to a data structure *per se* held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure’s functionality to be realized. In contrast, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure’s functionality to be realized, and is thus statutory.

Similarly, computer programs claimed as computer listings *per se*, *i.e.*, the descriptions or expressions of the programs, are not physical “things.” They are neither computer components nor statutory processes, as they are not “acts” being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer which permit the computer program’s functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program’s functionality to be realized, and is thus statutory. *See In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035.

Claims 1-10 recite systems comprising a series of elements including hardware elements that might be capable of defining a structural and functional interrelationship so as to achieve a practical application of the recited functional descriptive material. However, as noted above (see the rejection under 35 U.S.C. § 112), the functional interrelationship between the recited elements is unclear from the claims, and thus, the functional result of the claims is uncertain. Because of this uncertainty, claims 1-10 cannot be said to clearly recite statutory subject matter.

7. To expedite a complete examination of the instant application, the claims rejected under 35 U.S.C. §101 (non-statutory) above are further rejected as set forth below in anticipation of Applicant amending these claims to place them within the four statutory categories of invention.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,981,211 (Claussen et al.) in view of applicants' admitted prior art (Figure 1 and its associated text).

Regarding claim 1, *Claussen et al.* discloses a system for manipulating a document object model, the system comprising:

a memory for storing instructions (see, e.g., FIG. 1);

a processor for executing the instructions stored in memory (see, e.g., FIG. 1), the executed instructions providing:

a collection of predefined document object model behavior elements, the collection of predefined behavior elements including at least one behavior element of a received markup file (see, e.g., col. 5, line 45, through col. 6, line 48 (tag libraries are registered listing recognized tags and directives on how to load the appropriate tag handlers during runtime processing); col. 7, line 15-16), each behavior element comprising:

a namespace for identifying the behavior element (see, e.g., col. 7, lines 20-22);

an event attribute for associating the behavior element to an event (see, e.g., col. 5, lines 45-67 (tag libraries are registered listing recognized tags and directives on how to load the appropriate tag handlers during runtime processing)); and

other attributes for describing features of the behavior element (see, e.g., col. 8, lines 26-36); and

a collection of scripts for performing actions associated with the set of behavior elements, each script associated with a behavior element, the actions manipulating the DOM in a predefined manner according to the script associated with the behavior and the other attributes of the behavior element (see, e.g., col. 5, line 45, through col. 6, line 48 (taglibs defining tag handlers)); see also Figs. 7 and 8 and their associated text..

Although *Claussen et al.* is silent on the receiving of a markup file at a “viewer” for the creation, manipulation, and displaying of a DOM from the received markup file, applicants disclose as prior art such viewers for receiving such markup files and monitoring for events associated with events which trigger event handlers that allow for modification of a DOM. Applicant’s Figure 1 and Specification p. 6, line 8, through p. 7, line 4. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize such a viewer for the creating, manipulating and displaying of a DOM from the received markup file as part of making use of known software tools for their intended purpose.

Regarding claims 2-4, *Claussen et al.* further discloses the behavior element is associated with (parent/child of) an extensible markup language element (see, e.g., col. 19, lines 42-51 (describing processing of parent/child nodes); col. 9, lines 2-27 (processing the DOM tree as XML)).

Regarding claim 5, *Claussen et al.* further discloses the actions comprise behavioral mutations of an output of extensible markup language elements (see, e.g., col. 8, line 51, through col. 9, line 27).

Regarding claim 6, *Claussen et al.* further discloses an initialization function for directing the processing of one or more behavior elements in a document object model, the initialization function having instructions for traversing each node in the document object model and for searching and calling functions associated with behavior elements having names following the



predetermined naming convention ((see, e.g., col. 5, line 45, through col. 6, line 48 (tag libraries are registered listing recognized tags and directives on how to load the appropriate tag handlers for custom tags in a DOM during runtime processing)).

Regarding claim 7, *Claussen et al.* further discloses:

a collection of behavior attributes for adding to existing regular extensible markup language elements in a document object model, the behavior attributes following the predetermined naming convention (see, e.g., col. 5, line 45, through col. 6, line 48 (taglibs defining tag handlers for custom tags in a DOM)); and

a collection of scripts for performing actions associated with the collection of behavior attributes, each script associated with a behavior attribute (see, e.g., col. 5, line 45, through col. 6, line 48 (taglibs defining tag handlers)).

Regarding claim 8, *Claussen et al.* further discloses the initialization function contains instructions for traversing each node in the document object model and for searching and calling functions associated with behavior elements and behavior attributes having names following the predetermined naming convention (see, e.g., col. 5, line 45, through col. 6, line 48 (tag libraries are registered listing recognized tags and directives on how to load the appropriate tag handlers during runtime processing)).

Regarding claim 9, *Claussen et al.* further discloses the collection of behavior elements comprises a markup language (see, e.g., col. 5, line 45, through col. 6, line 3).

Regarding claim 23, *Claussen et al.* discloses a method of manipulating a document object model, the method comprising the steps of:

- parsing a markup file to a DOM (see, e.g., Figs. 7 and 8 and their associated text);
- adding an event listener to monitor for an event specified in an event attribute (see, e.g., col. 5, lines 45-67 (tag libraries are registered listing recognized tags and directives on how to load the appropriate tag handlers during runtime processing));
- receiving an event which is equal to an event attribute setting in the designated element (col. 6, lines 36-48 (A tag with a corresponding tag handler is processed)); and
- calling a predefined script associated with the predefined behavior element having the event attribute matching the received event, the script performing actions including manipulating the DOM in a predefined manner based on other attributes of the behavior element (see, e.g., col. 5, line 45, through col. 6, line 48 (taglibs defining tag handlers)); see also Figs. 7 and 8 and their associated text.

Although *Claussen et al.* is silent on the receiving of a markup file at a “viewer” for the creation, manipulation, and displaying of a DOM from the received markup file, applicants disclose as prior art such viewers for receiving such markup files and monitoring for events associated with events which trigger event handlers that allow for modification of a DOM. Applicant’s Figure 1 and Specification p. 6, line 8, through p. 7, line 4. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize such a viewer for the creating, manipulating and displaying of a DOM from the received markup file as part of making use of known software tools for their intended purpose.

Regarding claim 24, *Claussen et al.* further discloses the step of calling a script includes the steps of:

determining if the name of the designated element contains a designated prefix (see, e.g., col. 7, lines 37-51);

generating a function name comprising of the name of the designated element (see, e.g., see, e.g., col. 7, lines 2-12);

assigning an object associated with the designated element as the parameter of the function name (see, e.g., col. 8, lines 26-36); and

assigning predetermined instructions of the designated element as steps for a function having the function name to perform (see, e.g., col. 7, lines 2-12; col. 8, lines 2-48).

Regarding claim 25, *Claussen et al.* further discloses the step of calling a script includes the steps of:

dynamically generating a function name associated with the designated element (see, e.g., col. 5, lines 10-12; col. 7, lines 2-12);

passing an object associated with the designated element as a parameter of the generated function name (see, e.g., col. 8, lines 26-36);

receiving the attributes of the object (see, e.g., col. 8, lines 26-36); and

performing a function stored in memory having the generated function name (see, e.g., col. 7, lines 11-12).

***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric B. Kiss whose telephone number is (571) 272-3699. The examiner can normally be reached on Tue. - Fri., 7:00 am - 4:30 pm. The examiner can also be reached on alternate Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Dam, can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eric B. Kiss/  
Eric B. Kiss  
Primary Examiner, Art Unit 2192